

NOT A REAL WORLD EVENT *This is part of an asteroid threat exercise conducted during the 2015 IAA Planetary Defense Conference.*

DAY 1

PRESS RELEASE: JUNE 9, 2015

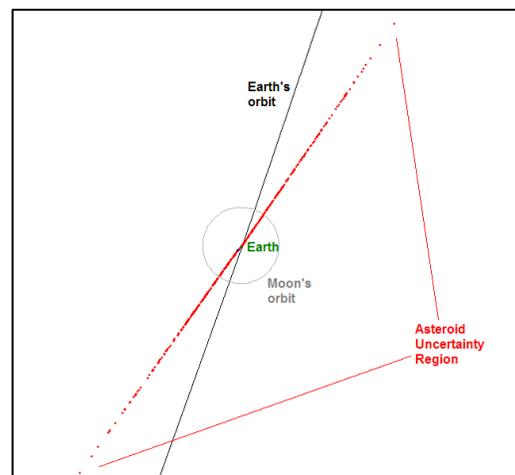
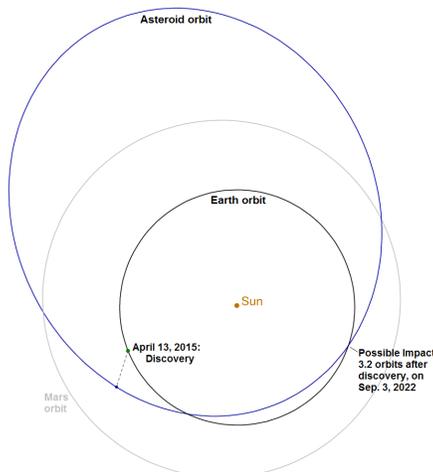
NEWLY DISCOVERED ASTEROID POSES SMALL THREAT OF EARTH IMPACT

A recently discovered near-Earth asteroid is predicted to pass very close to the Earth on September 3, 2022. The asteroid, designated 2015 PDC, was discovered on April 13, 2015, and has been tracked continuously over the last two months by observatories around the world. Predictions for the asteroid's encounter in 2022 indicate that, while unlikely, an Earth impact cannot be ruled out. The current likelihood of impact is about 0.9% or 1 chance in 110, according to the International Asteroid Warning Network (IAWN), a worldwide partnership of agencies that detect, monitor and track potentially hazardous asteroids.

This asteroid's encounter should be no cause for public concern, since an actual collision is very unlikely: the chances are 109 out of 110 that the asteroid will safely pass by our planet. As 2015 PDC continues to be tracked by astronomers around the world through the rest of 2015 and into early 2016, its orbit will be better refined and in all likelihood, the possibility of impact will be eliminated.

The brightness of 2015 PDC suggests that it is between 140 and 400 meters (460 to 1300 feet) in diameter, but it is too distant for astronomers to make a more accurate estimate. The asteroid approached to within 0.2 AU (29 million kilometers or 18 million miles) of Earth on May 12, but it is now receding from the Earth and will not approach our planet again until the close approach in 2022. The image below on the left shows the orbit of 2015 PDC relative to the orbit of the Earth, along with the positions of the Earth and asteroid when the asteroid was discovered. The image on the right shows a zoomed-in view of the intersection point of the two orbits, along with the current uncertainty region of the asteroid when the Earth crosses the asteroid's orbit in 2022 (Moon's orbit to scale).

Orbit of Asteroid 2015 PDC



EXERCISE**EXERCISE****EXERCISE**

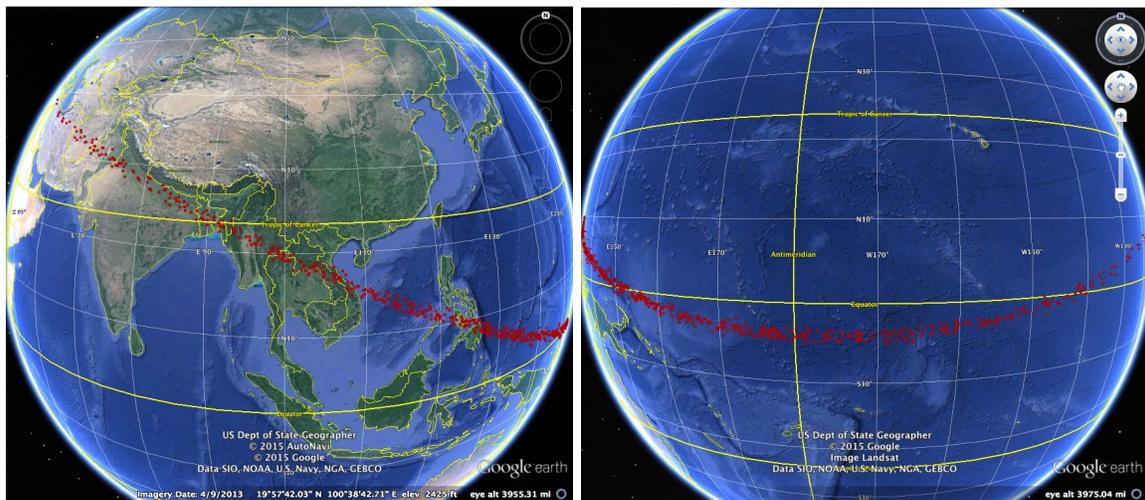
NOT A REAL WORLD EVENT *This is part of an asteroid threat exercise conducted during the 2015 IAA Planetary Defense Conference.*

The current best estimate for the close approach distance in 2022 is about 30,000 km (19,000 miles). At the time of closest approach to Earth, the asteroid is predicted to pass inside the ring of geosynchronous satellites.

2015 PDC has reached a rating of 2 (yellow) on the 0-to-10 Torino Scale, indicating that it merits special attention by astronomers. 2015 PDC is not the first asteroid to reach Torino level 2: asteroid (99942) Apophis reached level 2 and moved up to level 4 in late 2004 before additional observations uncovered in sky-image archives eliminated the possibility of impact in 2029. IAWN astronomers are actively searching the archives for similar serendipitous pre-discovery images of 2015 PDC, but none have been found to date because the asteroid has not approached close to Earth in over 20 years.

IAWN, established at the direction of the United Nations in 2013, links together the institutions that discover, monitor, and physically characterize the potentially hazardous NEO population. The IAWN partners include the Minor Planet Center (MPC), which maintains an internationally recognized clearinghouse for the receipt, acknowledgment and processing of all NEO observations, and NASA's NEO Program Office¹ and the European NEODyS group², which specialize in high precision orbit calculation and computation of impact probabilities.

The IAWN partners have published details on the parts of the Earth that might be directly impacted should asteroid 2015PDC actually collide with Earth. The pair of images below shows the preliminary "risk corridor" traced by the red dots which extend from the eastern Pacific Ocean, through the South Pacific, the Philippines, South China Sea, Southeast Asia, Myanmar, Bangladesh, India, Pakistan, Afghanistan and through Iran.



For more information, visit: <http://neo.jpl.nasa.gov/pdc15/day1.html>

¹ <http://neo.jpl.nasa.gov>

² <http://newton.dm.unipi.it/neodyS/>

EXERCISE**EXERCISE****EXERCISE**